

**Claims:**

1. A concentrate of a factor VIII:C-containing von Willebrand factor, wherein the concentrate is obtained by fractional precipitation from a liquid comprising factor VIII:C and von Willebrand factor and wherein the concentrate has an increased content of high molecular weight multimers of von Willebrand factor and a ratio of vWF:RCoF activity to vWF:Ag of greater than 1.
2. The concentrate as claimed in claim 1 wherein the concentrate is obtained from at least one of human plasma, plasma fractions, and genetically modified cell material.
3. The concentrate as claimed in claim 2 wherein the plasma fraction is cryoprecipitate.
4. The concentrate as claimed in claim 1 wherein the fractional precipitation is carried out using amino acids and at least one of an alkali metal and an alkaline earth metal salt.
5. The concentrate as claimed in claim 4 wherein the amino acid is glycine.
6. The concentrate as claimed in claim 4 wherein the alkaline earth metal salt is NaCl.
7. A composition for the treatment of at least one of hemophilia A and von Willebrand syndrome comprising the concentrate of claim 1.
8. The composition as claimed in claim 7, further comprising a stabilizer.
9. The composition as claimed in claim 8, wherein the stabilizer is calcium ions.
10. A process for producing a concentrate of a factor VIII:C-containing von Willebrand factor wherein the concentrate has an increased content of high molecular

weight multimers of von Willebrand factor and a ratio of vWF:RCoF activity to vWF:Ag of greater than 1, comprising subjecting a liquid comprising factor VIII:C and von Willebrand factor to a fractional precipitation using amino acids and at least one of an alkali metal and an alkaline earth metal salt.

11. The process as claimed in claim 10 wherein the amino acid is glycine.

12. The process as claimed in claim 10 wherein the alkaline earth metal salt is NaCl.

13. The process as claimed in claim 10 wherein the fractional concentration of the amino acid is from 70 to 160 g/l and the fractional concentration of the alkali metal or the alkaline earth metal salt is from 100 to 160 g/l.

14. The process as claimed in claim 10 wherein the quantity of the multimers of von Willebrand factor and the RCoF activity in the concentrate is controlled by adjusting the concentrations of the amino acid and the alkali metal or alkaline earth metal salt, wherein preferential precipitation of higher molecular weight multimers occurs at lower concentrations and precipitation of lower molecular weight multimers occurs at higher concentrations.

15. The process as claimed in claim 10 wherein the concentrate or a concentrate precursor product produced during said process is stabilized and pasteurized.

16. A process for producing a concentrate of a factor VIII:C-containing von Willebrand factor wherein the concentrate has an increased content of high molecular weight multimers of von Willebrand factor and a ratio of vWF:RCoF activity to vWF:Ag of greater than 1, comprising precipitating of a prothrombin complex by mixing a

dissolved cryoprecipitate with an aluminum hydroxide suspension, followed by stirring and removal of the prothrombin complex; precipitating fibrinogen with an amino acid, followed by removal of said fibrinogen; precipitating the vWF:FVIII:C complex using at least one of an alkali metal and an alkaline earth metal salt, followed by dissolving, stabilizing and pasteurizing the resulting precipitate, and subjecting the resulting vWF:FVIII:C complex to fractional precipitation to produce a concentrate.

17. The process as claimed in claim 16 wherein the amino acid is glycine.
18. The process as claimed in claim 16 wherein the alkaline earth metal salt is NaCl.